

# Researching the Impact of Medication Reconciliation Technicians (MRTs) in the ED

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## Published In/Presented At

Gonzales, J., Kromis, L., (2014, July, 25) *Researching the Impact of Medication Reconciliation Technicians (MRTs) in the ED*. Poster presented at LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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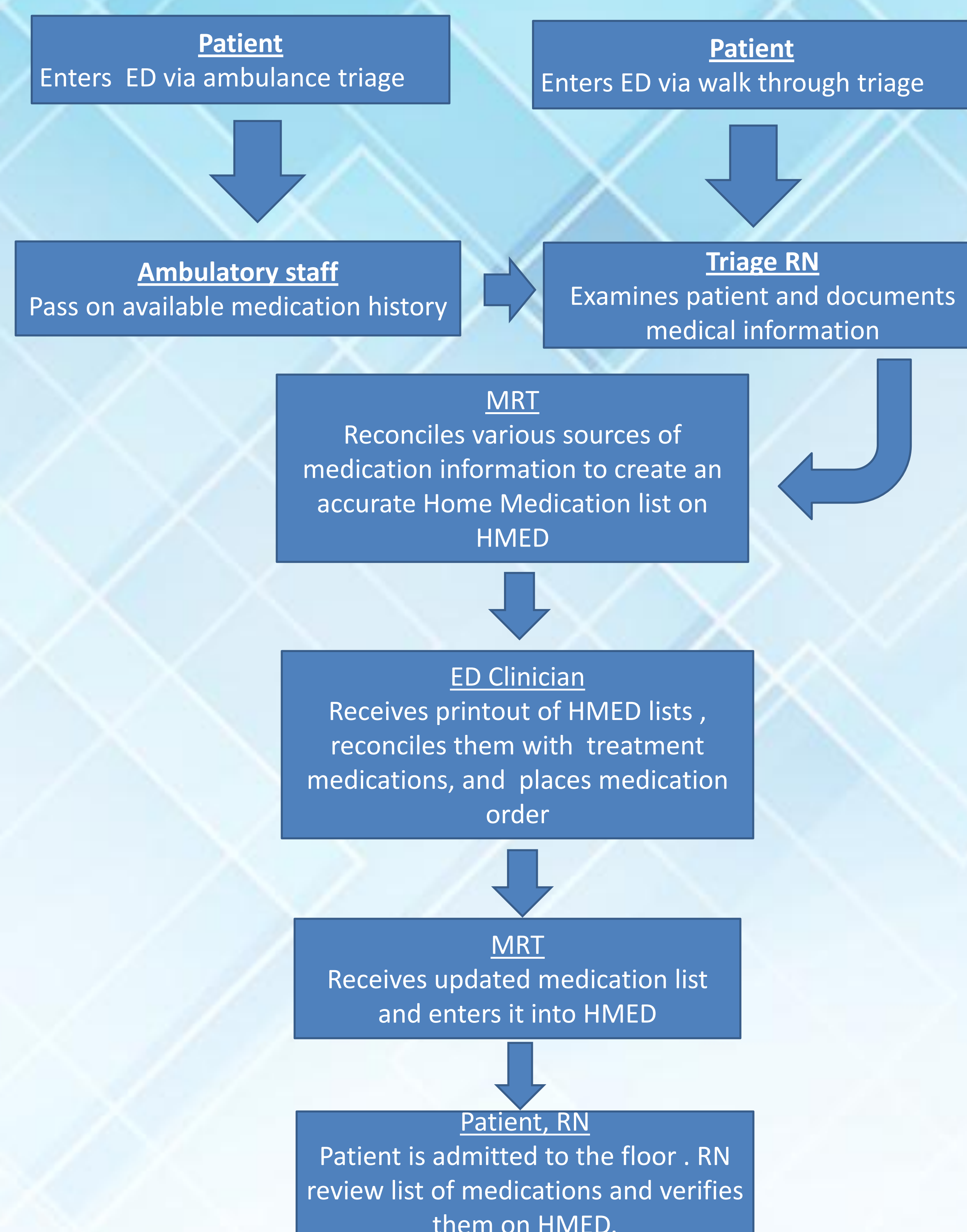
# Researching the Impact of Medication Reconciliation Technicians (MRTs) in the ED

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## Who Are MRTs?

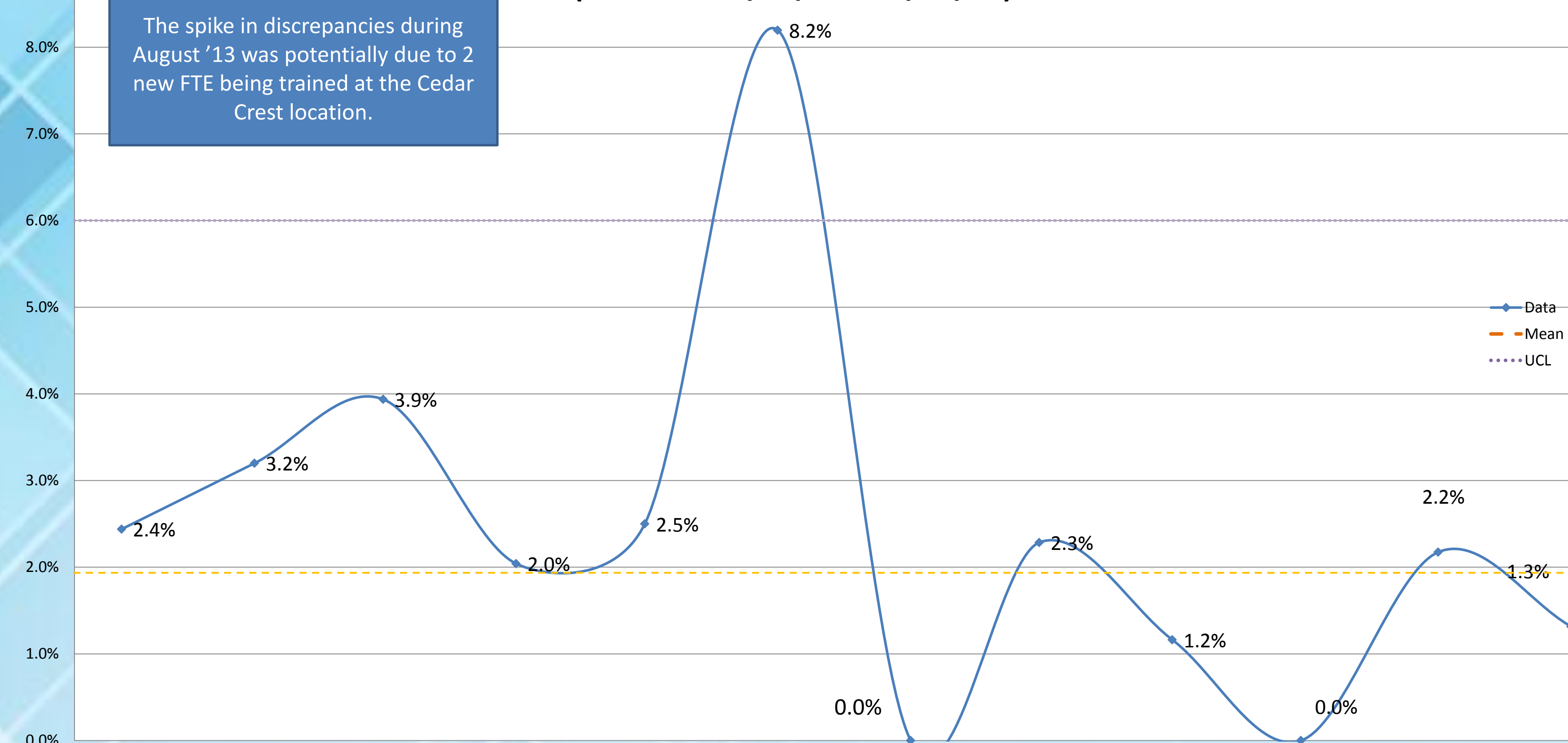
- They are pharmacy technicians trained to acquire the **best possible medication history** Upon admission into the Emergency Department
- Trained to reconcile various sources of medication information including:
  - The Patient
  - Personal Medication Lists
  - Medication bottles/containers
  - Pharmacy records
  - Primary Care Centers

## How do MRTs fit into the workflow?



## How Do MRTs impact Medical Errors?

### Med Rec Unintended Discrepancies by Month for LVH-CC (Data from 3/01/13 to 2/28/14)



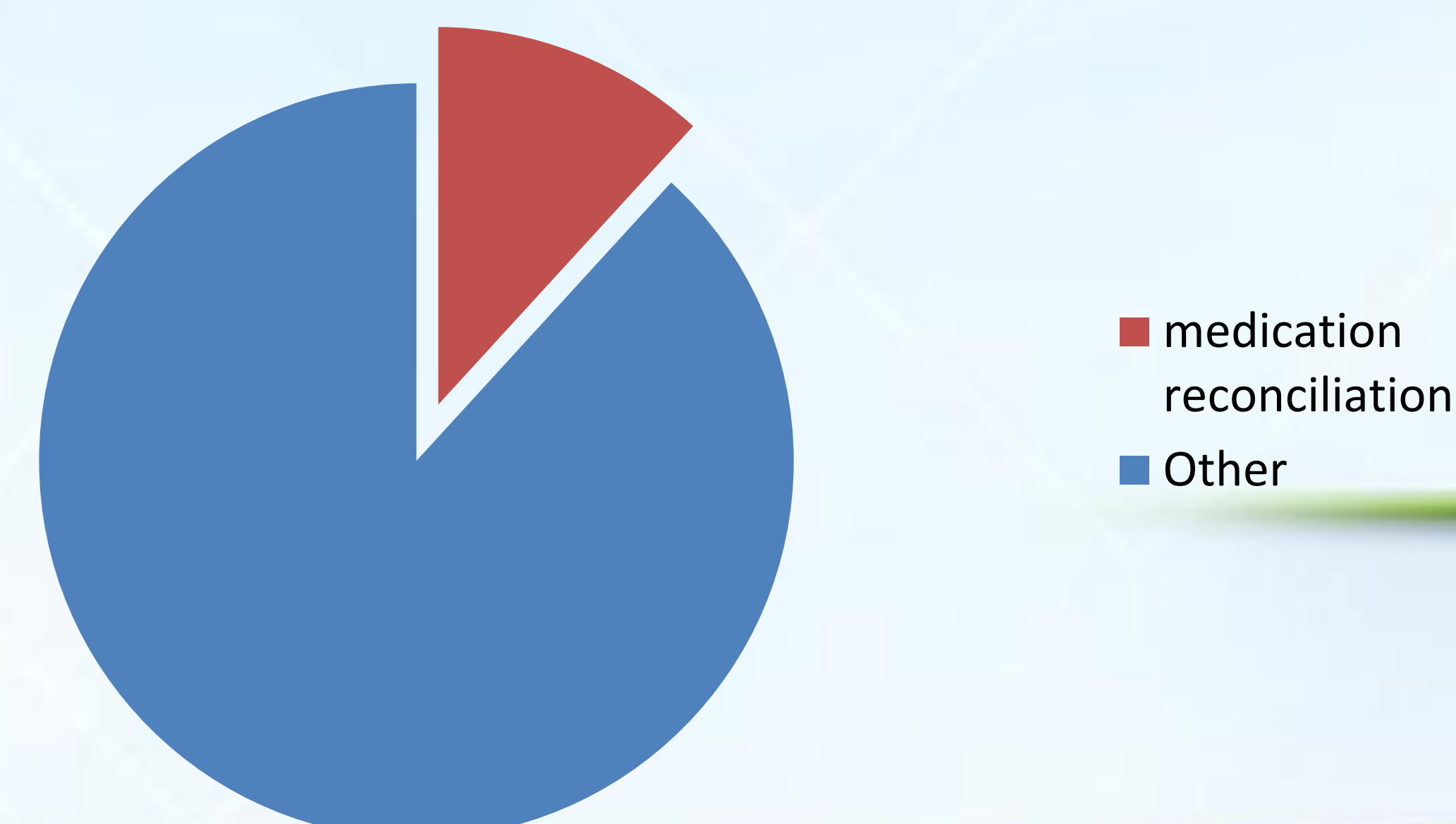
Prepared by: Dylan Finelli, DOM  
Source: TruSource Med Rec Report  
Date: 3/3/14

Date	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14
Discrepancies (NUM)	4	4	5	3	2	5	0	4	1	0	3	2
Total Med Rec Completed	164	125	127	147	80	61	141	175	86	133	138	152

## Medical Errors and Medication Reconciliation

- 11.8% of 984 Medication events were due to medication reconciliation issues
- 2.5% of the medication reconciliation errors led to adverse drug events
- On average cost \$1171 per Medication Event

### Medical Error Events from Quarter 4 of 2013 - Quarter 2 of 2014



## MRTS Decrease the Average Length of Stay (ALOS)

MRT MSORG	INP MRT Volume	ALOS	Network Volume	ALOS	ALOS Savings
292 heart failure & shock w cc	73	4.47	940	4.50	-0.03
378 g.i. hemorrhage w cc	71	4.25	605	4.26	-0.01
392 esophagitis, gastroent & misc digest disorders w/o mcc	71	3.48	1,568	3.50	-0.02
871 septicemia or severe sepsis w/o mv 96+ hours w mcc	57	6.05	1,076	6.20	-0.15
191 chronic obstructive pulmonary disease w cc	54	3.99	511	4.06	-0.07
603 cellulitis w/o mcc	52	3.27	891	3.57	-0.30
683 renal failure w cc	47	3.73	615	4.28	-0.55
194 simple pneumonia & pleurisy w cc	47	4.22	596	4.26	-0.04
312 syncope & collapse	38	2.73	466	2.88	-0.15
690 kidney & urinary tract infections w/o mcc	36	3.59	585	3.90	-0.31
291 heart failure & shock w mcc	35	6.03	454	6.68	-0.65
872 septicemia or severe sepsis w/o mv 96+ hours w/o mcc	34	3.99	610	4.57	-0.58
193 simple pneumonia & pleurisy w mcc	32	5.07	332	5.50	-0.43
065 intracranial hemorrhage or cerebral infarction w cc	31	4.13	428	4.25	-0.12
948 signs & symptoms w/o mcc	28	3.37	274	3.80	-0.42
190 chronic obstructive pulmonary disease w mcc	28	3.90	297	4.20	-0.30
176 pulmonary embolism w/o mcc	26	3.51	310	3.66	-0.15
641 misc disorder of nutrition, metabolism, and fluids & electrolytes w/o mcc	24	3.20	393	3.45	-0.25
309 cardiac arrhythmia & conduction disorders w cc	22	3.12	448	3.19	-0.07
202 bronchitis & asthma w cc/mcc	21	3.85	394	3.93	-0.08
Total	827		11,793		

- Time saved by MRTs ranged from 0.01-0.65 days
- MRTs save an average of 0.23 days/ Patient = 5 hours/Patient
- Savings of \$36,727 When applied to all 827 MRT treated patients

## Outlook for the Future

- Train 15 more MRTs to treat all ED patients for Cedar Crest and Muhlenberg Campuses
- Decrease the rate of medical errors in order to provide better quality patient care.
- Reduce cost of patient care by decreasing the ALOS, and reducing medication error events.
- Educate patients on the importance of knowing their own medication list

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